PCS proceedings. As I'm here representing the manufacturer from a financing prospective no further reference will be made to those positions.

I am employed by AT&T Network Systems, therefore my views on finance are from a supplier's prospective.

I think the first thing here is where is the money going to come from to get this new business started, let it remain viable, and grow.

We believe that that's the question that the FCC invited this panel to answer. And I think to facilitate that question they provided three sub questions: What market and regulatory factors will make PCS a viable business, what type of financing will support PCS, and how can the Commission best create realistic opportunities for designated entities.

With respect to the first question I will focus on the problem, three environmental factors that in our view will contribute to the viability of PCS, number of licenses, geographic scope, build out requirements.

In general the decision to provide financing is based on perceived risk and return expectations. The higher the risk profile, the higher the expected return, and the lower probability of finding investors willing to invest.

Therefore, investment opportunities with the perception of extremely high risk will lack for investors. We believe that there will be a direct correlation between the number of licenses granted, the geographic scope, the associated build out requirements, and the economic viability of such a venture.

The combination of a small geography and a high number of licenses with less than aggressive build out requirements theoretically creates a highly competitive environments which is one of the Commission's objectives.

However, such an environment may not appeal to investors, either debt or equity. Simply because predictions of viability will be more difficult.

Each licensee must have access to a sufficiently-sized population so that reasonable -- so that at reasonable penetration rates their business venture will be a viable one.

It is impossible to state with any degree of certainty just how the mandated build out period will produce the PCS performance data that investors normally look for prior to making investment decisions.

However, we believe the longer the time frame before PCS specific performance data is available, the longer the period before investors come on board in significant numbers. Come on boards in signature numbers.

Industry specific data remove uncertainty and stimulate rational investment. As a result we suggest that the build out requirements be revisited to ensure that they are closely linked to market demand and provide investment opportunities that attract investors.

The second question, we believe the license acquisition will be financed strictly

through equity.

The economic potential of this market in the proposed environment with such -- so much uncertainty will make it difficult to find debt at this time.

On the third question I want to address something that is very important. We believe to mitigate against the unintentional warehouse of licenses which would be due to insufficient capital to progress to the build out phase, the Commission may wish to consider establishing a total capitalization adequacy test as a form of prequalification for anyone entering the bidding process. Thank you.

MR. OXENDINE: Okay. This is not an easy one. We were asked to answer three questions, what market and regulatory factors will make PCS a viable business, what type of financing will support PCS, how can the Commission best create realistic opportunities.

That's a lot to answer in five minutes. I'll have to refer to my notes. I think that with

regard to encouraging participation of designated entities, namely women, small business, rural telcos, it is important for us to create some meaningful opportunities. And in order to do that or we need some resources.

We as minorities, women, and small business do not have sufficient resources or experience or expertise to do it by ourselves.

So I think the Commission has to look at some preferential provisions for us. Specifically the Commission has looked at spectrum set asides, tax certificates, and installment payments.

And I think each of these are invaluable for us. But recently the Commission had wanted to reexamine policies regarding tax certificates -- well, not tax certificates, but reexamine some of its policies. And I think that while they should reexamine them they should not completely eliminate them because they are reexamining them.

For example, one concern of the Commission -- and I imagine everybody's -- is that set asides are for minority and women only, but in

fact if these set asides supposedly include small businesses, minorities and women, and all of us qualify to bid on supposed set asides, then there ought not to be any constitutional problems with set asides.

So I think that it is dangerous to look at set asides and then eliminate them. I think if we look at set asides we'll probably want to keep them.

Initially I said that I don't think we are as minorities have a heck of a lot of money. Having been a former banker and currently a venture capitalist, I think putting on my business hat I would like to see people come to the table who have some experience. And we are going to have to do that perhaps with some joint ventures.

So I kind of suggest that we as designated entities should be able to joint venture with other companies who both offer us some telecommunications experience as well as some dollars.

And I know the Commission is concerned

about preventing designated entities being fronts. And consequently they have put some pretty tight rules regarding having a 50 percent ownership and 50 percent control.

But I think that these ownership restrictions need to be looked at. Specifically being a radio person and owning some television stations I know that I'm able to do that having had control of my stock but at the same time not having 50 percent equity interest in my company.

And I would hope that the Commission would be able to revisit that issue and look at the fact that perhaps they would be a little bit more flexible and not ask that you have to have 50.1 percent ownership as well as 50.1 percent control.

The Commission has looked at additional preference options for the designated groups. And it has been suggested that there be a two-year moratorium on the installment of payment.

And I think as a venture capitalist I think that makes some sense because when you have a business you have to make sure that when you build

it people have an opportunity to pay back whatever they borrowed. So this option they are looking at for a two-year pay back I support.

Currently the Commission does not allow the cellular companies to get involved with the designated entities as such, and I think that that -- I won't say that might be a mistake, but I think that we as minority entrepreneurs can use some of the expertise that the cellular folks have. And it might make some sense for us to work with them.

MR. GIPS: Mr. Wilkins?

MR. WILKINS: Instead of trying to go back over where everybody has been I think I will try to pick up because nobody seems to be able to finish.

I believe that the significant points here are that in order for anyone to be successful in this industry there has to be some assurance as Al indicated earlier there is equity in place that will allow that person or company to finance out their operations.

The cost of building the infrastructure necessary to support PCS/PCN under the current license structure is significant. And clearly very few people other than major companies can afford the capital to build out and competitively pursue the development of PCS/PCN with the current license structure.

I believe that the size in the licenses, the area, the geographic area should be reduced markedly. I think that instead of having the number that we are being asked to have now there should be at least two to three times that number of license areas.

I'm not sure how geographically one would break up the nation to create perhaps as many as 1500 licenses. But I think that that is necessary if the Commission wants to achieve the kind of diversity of ownership.

I think that that kind of definition of size, of license size, should run to a 20 megahertz block and as well to a 10 megahertz block to.

I believe that in addition to reducing

the size that the Commission in providing for designated entities the opportunity for financing the Commission should consider carefully an alternative to debt.

And that alternative would be an equity stake in each of the designated entities with the Commission taking perhaps a warrant in each of the designated entities as opposed to some kind of debt.

The Commission if it wanted to in some way monetize its equity holding it could set up a secondary market in warrants or other kinds of equity securities. It could block those equity securities, securitizing some other kind of instrument.

So that in effect the government could realize the cash state that it wanted now without necessarily hindering the development of the PCS PCS/PCN licenses.

In order for someone to be competitive in the 20 to ten megahertz blocks, that entity has to really have the capability of providing the

differentiated service to the public.

They cannot come in and provide PCS/PCN service as the 30 megahertz block will or they will lose from a competitive standpoint. And to be competitive, to have the capability to offer differentiated service, one has to have the capacity to go to the market and have the market when it pursues a financing receive the potential for success.

And that potential for success is enhanced to the extent that there are not debt burdens associated with a designated entity, to the extent that there aren't encumbrances associated with the ownership that is the 51 percent limitation and/or the resale of the license.

I think that to the extent that the Commission and/or the government would take an equity interest a lot of those concerns would go away.

The government should prequalify all of the designated entity holders so that in effect the problems of how much equity an entity holds would

be eliminated prior to the auction actually taking place.

And once the auction had been completed, the designated entity or any other party would be free to sell that license on the open market. That in fact would provide an enhanced basis for raising capital in the marketplace.

MR. GIPS: Mr. Rissman?

MR. RISSMAN: As an equity telecommunications analyst for a firm with about $35 billion to invest and about 15 percent of that going to our telecommunications issues judging from the previous comments it looks like we are going to be seeing some activity.

I have to preface my remarks with the fact that on Wall Street perception is everything. What we think we know is true makes all the difference. It may be true. It may be false. Everything is what is in our minds. Too bad. The market is like that.

The environment that PCS would be born in will be very hostile, extremely hostile. You know,

I'm assuming 1994 -- late '94 options. I'm assuming a two-year build out period. By then I think the addressable base will be 25 to 30 percent penetrated with existing cellular services. Everything will be digital. Costs will have declined for the incumbents. Seamlessness. Nationwide basis will be there. Microcells will be there. People will have events intelligent network capabilities so that you will have one person, one number service. It will be a very full service cellular incumbent environment. It will be very tough to match those full services.

Based on the applications some -- some applications will die. Some applications might be able to slip under the door. A ME 2 (phonetic) application, it's dead on arrival. The best customers are gone.

PCS might be the only alternative service that does not have national seamlessness. If P-Tag (phonetic) goes with CDMA and if somebody else goes with GSM you're not going to be able to use the same handset.

The incumbents, the cellular incumbents, will offer one person one number service. If you are a ME 2 (phonetic) cellular system, you are going to start building out macrocells. Your competitor is going to say well, look, I have macrocells. I have microcells. You can use your handset in your car. You can also use it in your house.

The PCS competitor comes and says hey, look, you can use your handset in your car. Big deal. For that reason because they can't compete on services they will be forced to compete on price.

Because the cellular operators will probably enjoy a price advantage, on a ME 2 (phonetic) cellular service the PCS guys will be the first ones out of business.

Cordless long distance access might be a fairly viable alternative in the short term but that is only an arbitrage of the subsidies.

And as those subsidies go away, as things become more rational, these guys won't have a

reason to exist.

It is possible -- I can think of one investible application and that is optimize your system. Current cellular systems are optimized for vehicular service. Optimize your system for people who are in their homes and who are walking around.

There is a lot of equipment that you don't need, equalizers, echocancelers, things like that. You started with that and then build out your service slowly to become a macro cellular service. You might have to charge more than a cellular incumbent for macro cellular. You can charge less for micro cellular. You might be able to get it that way.

The final point is give PCS operators as much as you possible can give them. That will -- only that will ensure their success. We do not want to finance anything that we have doubts about whether their system will work.

If you come to us with proven amount of spectrum and you may get financing.

MR. GIPS: Thank you. A little

depressing, but thank you.

MS. PERETSMAN: I'm Nancy Peretsman. I'm a managing director of Salomon Brothers. I had relished the opportunity to come down here today and get away from the recent pessimism of the street, but here I am again.

UNIDENTIFIED SPEAKER: That's the streets for you.

MS. PERETSMAN: That's right. I'm on the investment banking side of the business. I thought I would really limit my remarks specifically to the questions of what type of financing will support PCS, in that that is a marketplace with which I have the highest familiarity.

If one of the axioms that was advanced earlier is that perception is everything, the second axiom of the street is that history repeats itself or learn by example.

The last part of that axiom is there is really nothing ever new. And based on theory I thought that the best way to consider how PCS might be ultimately be financed is to look at some of the

recent models we have had in the marketplace.

We have case studies clearly in cellular business. We have case studies in SMR, in cable, in the CAPs (phonetic), and even to some extent in the United Kingdom cable and telephony businesses.

What these businesses all had in common is that they sourced from banks -- not in this particular order -- but from banks, the financial markets, the venture community, and the strategic investors capital for businesses that yet weren't fully operational in terms of the cash flow, meaning that the cash from those businesses didn't in and of itself support those businesses.

The question that always strikes one was well, okay, how do they do it because maybe we will learn something here. What is interesting is if you look at each of these case studies, and they vary depending on the peculiarity of that particular time, place is that there are some similarities.

One is what we call establishment of franchise value. Many of these industries were

able to finance themselves because they could prove to the financial market that there was a franchise value.

Now, what does a franchise value really mean? In its most distilled terminology it is that there is a buyer for these assets and the price that the buyer would pay is ascertainable.

If you go back to the early days of financing of cellular, if you go back 12 years ago to when some of us were out there trying to raise money in the cable business, at the end of they day the comfort that the financial community was able to get, whether it was the providers of debt or even to some extent with the providers of equity were, well, if we gave up this franchise, what would somebody pay for it?

And that allowed if you will a base case to establish a frame work from which people could calculate estimates on financial return.

Obviously this is a slightly different world that we were considering in PCS because franchise value is going to be a function of

competition, and it is also going to be a question of franchise value and to whom.

One of the questions that I think is legitimately on the table is we have been talking about competition among the wireless operators and how competitive that might be.

The gentleman to my left I think introduced a very interesting concept a few minutes ago and that is the question of the true definition of the telecommunications marketplace.

Is this really competition among the wireless providers, or is it in fact this competition among all the possible providers of telephony service? Because we are, I would argue, looking at a model that is going to suggest that we have many more possible components here providing services going forward.

The second aspect that I would say if I were to grossly generalize over some of the trends that have underscored the financing of the different industries is that there was either early strategic money that went into that industry and

made a difference, or there was very deep pockets by -- best described by people who believed.

When you had Craig McCaw (phonetic) selling cable systems -- thank you.

MR. GIPS: Finish your sentence.

MS. PERETSMAN: Well, you can come back to me in Q&A.

MR. GIPS: Mark?

MR. ROBERTS: Now I know why Paul Rissman does not return my phone calls.

My name is Mark Roberts. I'm a telecommunications analyst with Alex, Brown & Sons. To preface my comments and put them in some context, we are the oldest investment banking firm in the United States.

We have made a specialty out of focusing on growth and emerging growth industries. We -- for example, since 1980 we have done more initial public offerings of companies than any firm on Wall Street.

We spent a lot of time studying PCS. And I think we might have a view that is a little bit

differentiated than some others that you'll hear from on Wall Street.

I think part of this is we have not done a lot of the investment banking work for the incumbent cellular service providers which we think tends to bias the view somewhat.

Let me state my basic premiss. We believe that personal communications services will be rapidly deployed at price points likely to stimulate significant demand and foster rapid growth if licensees can acquire large blocks of contiguous spectrum covering large, economically-significant areas.

Two points, competition will be the driving force behind the deployment of PCS. And at our firm we see significant linkage between rapid deployment of PCS and regulatory and legislative efforts to introduce competition into other forms of voice, video, and data communications.

Second point, the ability of PCS to compete with cellular is critical. Because we believe at a minimum, full cellular mobility is the

first visible market for new PCS entrants.

We are also think that the nature of PCS will tend to favor large dominant communication service providers because first of all PCS networks are going to be very capital intensive, very high fixed cost networks that require heavy investment well in advance of any revenues or potential investment returns.

Secondly, PCS makes the most economic sense and tends to have the highest value to the licensee when it is leveraged off of an existing wire line backbone such as an inter exchange carrier, a local telco, cable TV, or even a competitive access provider.

Now, we think the license structure issues that will make PCS a viable business and tend to maximize the auction bids are one, a minimum of 30 megahertz of contiguous spectrum, two, minimum of an MTA license size, and three, that you minimize the timing of the availability -- the timing of this new service, that the auction should go forward very quickly.

Let me expand on that very briefly. The 30 megahertz license size, PCS entrants must get contiguous blocks of spectrum so that they can efficiently compete and have a similar cost structure to the incumbent's cellular service providers that have 25 megahertz.

Secondly, license sizes of less than 30 megahertz are likely to permanently lock in premium investment returns for the cellular industry. Now, this will inhibit PCS deployment and inhibit their ability to raise capital.

The minimum MTA license sizes are similar, you reduce the time of after market aggregation and the cost of aggregation which tends to increase the amount someone can bid and the shortens their time to deployment.

Thirdly, the biggest risk, as I have already mentioned, is that the license -- that you structure the licenses in such a way that it requires a lot of after market aggregation which expands the time to market.

The longer the time to market, the lower

the expected investment returns, and the higher the cost of capital will be, the harder time I will get Paul from returning my phone calls.

Lastly, let me close by saying that we are very -- we find PCS very attractive.

MR. GIPS: I like that closing. I would actually like to start by pushing further on the part that Mark was just making and have some of the other panelists comment on what is the amount of spectrum we have to provide for PCS to be viable in terms of being able to attract financing. And it is open to anyone.

MR. RISSMAN: If I could answer your question this way. Right now we don't know what the size of the spectrum award is that will work.

We have consultant studies that say 20 megahertz is fine. We have consultant studies that say 30 megahertz is fine. We have consultant studies that say you need at least 40 megahertz.

All I can tell you is that Mercury one to one has 50 megahertz of cleared spectrum that it doesn't don't have to share with anybody, and they

are successful.

Incidently, they claim that 50 megahertz allowed them to reduce their capital expenditure cost by 20 percent over what it would have been if they had been given a plain old cellular spectrum.

So what we would like to see is a spectrum grant that we know is going to work. We do not want to see a spectrum grant where we will be scratching our heads saying, boy, if this doesn't work our money is down the drain.

There is enough risk in this as it is that the size of the spectrum grant does not have to be the issue around which the risk turns.

MR. GIPS: Is there a tipping point.

MR. RISSMAN: All I can tell you is we know it works for 50 megahertz. We don't know whether it works for anything else.

MR. GIPS: Mark?

MR. ROBERTS: Let me -- yes, I will expand on my earlier comment briefly because we are currently working with a number of the technology providers and have talked with a number of the